



# SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 16 78 65 19

**Classification of the application (IPC):**  
*B29C 63/32, F16L 55/165, F16L 55/18*

**Technical fields searched (IPC):**  
B29C, F16L

| DOCUMENTS CONSIDERED TO BE RELEVANT |                                                                                                                                                                                               |                   |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Category                            | Citation of document with indication, where appropriate, of relevant passages                                                                                                                 | Relevant to claim |
| X                                   | EP 2460643 A1 (SEKISUI CHEMICAL CO LTD [JP])<br>06 June 2012 (2012-06-06)<br>* paragraphs [0010], [0054], [0056], [0065], [0090], [0094] *<br>* figures 8, 11 *                               | 1-10              |
| X                                   | JP 3163054 B2 (SEKISUI CHEMICAL CO LTD; ADACHI KENSETSU KOGYO KK) 08 May 2001 (2001-05-08)<br>* paragraphs [0005], [0026], [0027], [0035], [0036], [0061], [0062] *<br>* figures 15, 16, 27 * | 1-10              |
| X<br>A                              | JP 3657056 B2 (SEKISUI CHEMICAL CO LTD) 08 June 2005 (2005-06-08)<br>* paragraphs [0008], [0027], [0028], [0033] *<br>* figure 3 *                                                            | 1, 4-10<br>2, 3   |

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

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|---------------------------|-----------------------------------------------------|--------------------------|
| Place of search<br>Munich | Date of completion of the search<br>30 October 2018 | Examiner<br>Dias, Filipe |
|---------------------------|-----------------------------------------------------|--------------------------|

## CATEGORY OF CITED DOCUMENTS

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|---------------------------------------------------------------------------------|------------------------------------------------------------------------|
| X: particularly relevant if taken alone                                         | P: intermediate document                                               |
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| O: non-written disclosure                                                       | D: document cited in the application                                   |
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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 16 78 65 19

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| Patent document cited<br>in search report |    | Publication<br>date | Patent family<br>member(s) |                 | Publication<br>date |
|-------------------------------------------|----|---------------------|----------------------------|-----------------|---------------------|
| EP 2460643                                | A1 | 06-06-2012          | AU                         | 2010279168 A1   | 23-02-2012          |
|                                           |    |                     | CN                         | 102481725 A     | 30-05-2012          |
|                                           |    |                     | EP                         | 2460643 A1      | 06-06-2012          |
|                                           |    |                     | JP                         | 5602737 B2      | 08-10-2014          |
|                                           |    |                     | JP                         | WO2011013636 A1 | 07-01-2013          |
|                                           |    |                     | KR                         | 20120039041 A   | 24-04-2012          |
|                                           |    |                     | US                         | 2012118482 A1   | 17-05-2012          |
|                                           |    |                     | WO                         | 2011013636 A1   | 03-02-2011          |
| JP 3163054                                | B2 | 08-05-2001          | JP                         | 3163054 B2      | 08-05-2001          |
|                                           |    |                     | JP                         | H10274389 A     | 13-10-1998          |
| JP 3657056                                | B2 | 08-06-2005          | JP                         | 3657056 B2      | 08-06-2005          |
|                                           |    |                     | JP                         | H09310788 A     | 02-12-1997          |

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